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EXAMINER

BODAWALA, DIMPLE N

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims **1, 9, 13, 19 and 21-36** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 is rejected because claim 1 cites limitation of "... coating comprises innumerable pores about 85% or more of which having diameter of from between 25nm to about 90nm..." which is not

described such away in the specification of the instant application. However, specification teaches only “pores about 85% which having diameter of greater than 25nm”.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 9, 13, 19 and 21-36 are rejected under 35 U.S.C. 103(a) as being obvious over Minoda (JP 2002-302795; which is cited by Applicant on PTOL-1449).

8. Minoda discloses an invention related to surface treated aluminum material wherein aluminum or aluminum alloy surface which is coated with anodic oxide film, wherein such film is involved to form fine pores (See paragraph # 6-7 of the translation), wherein pores about 85% or more (See figures 1-2) having diameters 50-200 nm (See paragraph # 8 of the translation), wherein thickness of the anodic oxide film is 30-400, more preferably 100-300 nm (See paragraph # 16). It further teaches that the coating having depth about 60-100 nm (See paragraph # 17). It further teaches that the worked aluminum surface is laminated with resin film, such that the resin film can be raised notably within the pores, and, thus improves the tensile strength (See paragraphs # 2, 7, 14, 20-21, 28, 34, 37-38).

However, the thickness of the coating is in desired range as cited in the

claimed invention, therefore, the tensile strength also anticipates by the references based on calculation of the coating thickness, wherein varying thickness or depth of the coating within the range disclosed in order to optimize tensile strength would be an obvious variation to one of ordinary skill in the art.

9. Here claims 9, 13, 19 and 21-36 are claimed limitation of product produced by different method, while claim 1 is claimed product. Furthermore, claim 1 recites the process limitation for producing the product such as "injected synthetic resin". As we know that the product can be manufactured by different processes, unless it is Applicant's burden to prove that an unobviousness difference exists. With respect to the claim recitation regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claim. Note that determination of patentability is based on the product apparatus itself, *In re Brown*, 173 USPQ 685,688, and the patentability of a product does not depend on its method of production, *In re Pilkington*, 162 USPQ 145, 147; *In re Thorpe*, 227 USPQ 964 (CAFC 1985). Note that it is Applicant's burden to prove that an unobvious difference exists, *In re Marosi*, 218 USPQ 289, 292-293 (CAFC 1983), and Applicant must show that different methods of manufacture produce articles having

inherently different characteristics, *Ex parte Skinner, 2 USPQ2d 1788, See MPEP 2113*. If the prior art discloses different process to produce product invention with similar limitation of the claimed invention; therefore, the prior art anticipates or makes obvious the claimed invention.

10. Thus, Minoda suggests the tensile test for measuring tensile strength or adhesion of the worked aluminum material, but fails to provide range of the tensile strength.

11. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Minoda by providing range of tensile strength which is optimized from thickness or depth of the coating for forming stable and fine nanostructure with desired dimension and shape of pores, which is widely used for electronic and optical devices. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald, 619 F.2d 67, 205 USPQ 594 (CCPA 1980)*. See *MPEP § 2112- 2112.02*. Claimed range and the prior art range of composition are close enough to demonstrate similar properties and be expected to have a

standard results, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

12. **Claims 1, 9, 13, 19 and 21-36 are rejected under 35 U.S.C. 103(a) as being obvious over Iwasaki et al. (US 2002/0109134) in view of Minoda (JP 2002-302795; which is cited by Applicant on PTOL-1449).**

13. Iwasaki et al. discloses nanostructure which comprises aluminum material was deposited on substrate to prepare work piece (1) (See example 4), wherein work piece having anodic oxidation coating (4) for forming innumerable pores (3,5) about 85% or more (See figures 2A-2D; paragraphs # 47-48), wherein pores having depths are in the range of 10nm to 100µm (See paragraph # 52) and diameter is about 25 nm and 40 nm (See example-2). It further teaches that the depth of pores can be controlled by controlling thickness of coating (See paragraph # 52), thus, inherently suggests that the coating having depth in a range as cited in claim.

14. Iwasaki et al. discloses all claimed structural limitations as discussed above. It further discloses anodic oxidation coating comprising innumerable pores, but fails to teach or suggest synthetic resin material intruded in the pores.

15. Minoda discloses an invention related to surface treated aluminum material which has an anodic oxidation film (2) having plurality of fine pores

(5, 4) (See abstracts), wherein pore structures on the work surface of aluminum are adapted to receive resin material for improving adhesion (See paragraph # 2, 8, 14-15 of the translation), thus, aluminum work surface having anodic coating for forming pores, which is laminated by resin film, and then such work surface is configured for tensile test for estimating evaluation of adhesion (See paragraph #34). Thus, Minoda suggests the tensile test for measuring tensile strength or adhesion of the worked aluminum material, but fails to provide range of the tensile strength. However, the thickness of the coating is in desired range as cited in the claimed invention, therefore, the tensile strength also anticipates by the references based on calculation of the coating thickness, wherein varying thickness or depth of the coating within the range disclosed in order to optimize tensile strength would be an obvious variation to one of ordinary skill in the art.

16. Here claims 9, 13, 19 and 21-36 are claimed limitation of product produced by different method, while claim 1 is claimed product. Furthermore, claim 1 recites the process limitation for producing the product such as "injected synthetic resin". As we know that the product can be manufactured by different processes, unless it is Applicant's burden to prove that an unobviousness difference exists. With respect to the claim recitation

regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claim. Note that determination of patentability is based on the product apparatus itself, *In re Brown*, 173 USPQ 685,688, and the patentability of a product does not depend on its method of production, *In re Pilkington*, 162 USPQ 145, 147; *In re Thorpe*, 227 USPQ 964 (CAFC 1985). Note that it is Applicant's burden to prove that an unobvious difference exists, *In re Marosi*, 218 USPQ 289, 292-293 (CAFC 1983), and Applicant must show that different methods of manufacture produce articles having inherently different characteristics, *Ex parte Skinner*, 2 USPQ2d 1788, See *MPEP 2113*. If the prior art discloses different process to produce product invention with similar limitation of the claimed invention; therefore, the prior art anticipates or makes obvious the claimed invention.

17. So, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Iwasaki et al. by intruding synthetic resin material within pores of the worked aluminum surface as taught by Minoda because such feature is involved to form stable and fine nanostructure with desired dimension and shape of pores within the worked aluminum surface, and, thus, able to improve tensile strength or adhesion of the worked aluminum material. When the reference discloses all

the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP §§ 2112- 2112.02. Claimed range and the prior art range of composition are closed enough to demonstrate similar properties and be expected to have a standard results, *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

Response to Arguments

18. Applicant's arguments filed on 10/14/2008 have been fully considered but they are not persuasive.

19. Applicant argues that the foreign prior art (JP 2002-302795) comprises two anodizing steps, and the claimed composite is made with a single anodizing process step and does not have the detailed pores and hole structure as discussed in foreign art. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the claimed composite is made with a single anodizing process step and does not have the detailed pores and hole structure) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The patentability of a product or apparatus, however, does not depend on its method of production. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972); *In re Pilkington*, 411 F.2d 1345, 1348, 162 USPQ 145, (CCPA 1969); (*MPEP* § 2113). In this case, prior art discloses a product with all of the structural features defined in the claimed article and structure even with the defined steps in production.

20. Applicant further argues that the Prior art, Iwasaki fails to disclose the synthetic resin molding is intruded in the innumerable pores thereof and bonded together over a part or the whole surface thereof as to have a tensile strength from between 20 Kgf to at least 50 Kgf. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is (571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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